

SYSTEM AND METHOD FOR FABRICATING OR REPAIRING A PART

ABSTRACT OF THE DISCLOSURE

5 According to one embodiment of the invention, a system for fabricating a part includes a computer operable to control the fabrication of a three-dimensional part using a solid CAD model, a deposition station operable to deposit successive two-dimensional layers of material to fabricate the three-dimensional part, and a machining station operable to remove at least a portion of one or more of the deposited two-dimensional layers of material. The deposition station includes a
10 substrate on which to fabricate the three-dimensional part, a welding-based deposition system having a welding torch, a laser-based deposition system having a laser head, a plasma powder cladding system having a plasma torch, and a multi-axis robot operable to, when directed by the computer, utilize one of the welding-based deposition system, laser-based deposition system, and plasma powder cladding
15 system to deposit any of the two-dimensional layers of material. The machining station includes a multi-axis milling machine and an automatic tool changer. The milling machine is operable to, when directed by the computer, select from a plurality of machining tools associated with the automatic tool changer for use in the milling machine.